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WATERSHEDS

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RE: EPA Comments on the Draft Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters

Dear Ms. Anthony,

Thank you for the opportunity to comment on the Draft Methodology for Oregon's 2018 Water Quality Report and List of Water Quality Limited Waters. EPA would like to provide a few comments for your consideration in drafting the final listing methodologies.

**Use of the Binomial for Aquatic Life Toxic Substances:**

- EPA has maintained that use of the binomial is appropriate for assessing impairment for conventional pollutants, but for toxics, greater than one exceedance in three years should result in an impairment listing.
- ODEQ cites EPA's 2002 CALM guidance as a rationale for using the binomial for aquatic life toxics. However, the subsequent document, *Guidance for the 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act*, Section III (F), states the following:  
"EPA guidance recommends use of a 1 in 3 year maximum allowable excursion recurrence frequency—number of times conditions in a water are worse than those specified by the concentration and duration components of a freshwater aquatic life criterion for a toxic chemical. A key basis for this recommendation was a literature survey done in 1989, looking at recovery rates of freshwater ecosystems from various kinds of natural disturbances and anthropogenic stressors. This survey indicated that components of biotic communities took between 6 months and over 20 years to recover. The 150 studies reviewed indicated that the vast majority (85% to 95%) of macroinvertebrate endpoints (death, reproductive failure, etc.) recovered in 1 to 2 years, and fish metrics reflected similar levels of recovery in 2 years or less. On the other hand, fish in large rivers and lakes might take 20 to 25 years to recover adequately. Based on this information, EPA's Office of Research and Development recommended adoption of a 1 in 3 year maximum recurrence interval." EPA does recognize that "more frequent excursions might be acceptable in certain situations...If a State has articulated in its methodology a procedure for taking into consideration such site-specific factors, use of a more frequent return interval on a particular water, or type of water, could be acceptable. (Assuming, of course, that the procedure was scientifically valid, was properly applied, and is consistent with the State's WQS.)"
- EPA therefore does not recommend use of the binomial for aquatic life toxics as a blanket methodology across state waters. If site specific conditions warrant a site specific methodology, ODEQ could detail those circumstances, but without such case by case considerations, EPA recommends the use of the not more than one exceedance in three years approach.

### **Narrative Standards:**

- EPA would like to reiterate our previous comments urging ODEQ to develop interpretations for the narrative water quality standards, particularly for nutrients. Additionally, EPA would like to see a commitment from ODEQ as to when work on a numeric benchmark for sedimentation will be completed. “The Development of Bedded Sediments for Oregon Streams” was completed by TetraTech in 2009, but has not yet been implemented.
- EPA would like the impact of harmful algal blooms (HABS) on drinking water to be considered in greater detail. On page 28, for (3) under HABS, additional language such as, “...or measured in finished drinking water above the drinking water advisory guidelines...” would be useful. Additionally, for (2) vs (3) - is the requirement for listing that both (2) and (3) must be met? The state only issues an advisory when toxins or cell counts are above guidelines. The cell counts are not listed in the table, so is ODEQ intending to differentiate between toxin guidelines and cell count guidelines instead? This may be addressed under Category 3B, but could benefit from some clarification.
- For footnote 21, EPA has 304(a) recommendations/guidance for phosphorus and nitrogen, and that information could be included. Furthermore, Oregon recently completed NSTEPS project aimed at restoring wadeable streams (translations for narrative nutrient thresholds)- EPA encourages the state to include this source of state-specific analysis in their listing methodology. It is important to mention nitrogen in the context of HABs in particular, as control of TN and TP can be important.

### **Biocriteria:**

- We appreciate the transparent and professional approach ODEQ implemented in convening stakeholder meetings, developing a thoughtful white paper, and soliciting scientific expert panel opinions to inform key issues.
- We agree with ODEQ that linking aquatic life use attainment thresholds to ecological condition is important (see page 3 of biocriteria white paper). In addition, linkages to the biologic integrity goal of the Clean Water Act should be described in the 2020 update.
- EPA appreciates ODEQ’s consideration of equivalence testing as part of the 2020 update (see page 6 of the white paper). We agree that central tendency or equivalence testing approaches can be effective tools in comparing multiple samples from a single site to a larger population of samples collected from reference waters.
- EPA agrees with and affirms ODEQ’s consideration (page 38) of all available scientific methods to assess biologic conditions such as “multi-metric indices (MMIs) or simple metrics such as total richness, dominance, non-insect taxa, tolerance, etc.” These and other bioassessment tools are well documented in the primary literature and are supported by a history of application throughout the US.
- EPA looks forward to coordinating with ODEQ in evaluating O/E model accuracies and identifying aquatic life use attainment thresholds as part of the 2020 update process.

- With respect to potential placement of waters into Category 4, EPA emphasizes our national policy that the cause, or causes, of impairment need not be identified prior to placement into Category 5.
- We are interested in learning more the ecologic basis of the PREDATOR outlier test and potential Type 2 errors that may result in placing waters in Category 3 rather than 5.
- EPA is interested in reviewing and learning more about the statistical and ecologic analyses that supports selection of a five-year data window and how that may be representative of a site in the context of serial correlation, environmental cycles, or long-term trends.

EPA appreciates all the hard work ODEQ staff have put into drafting these revised listing methodologies. A great deal of time was dedicated to conducting workgroups which incorporated several stakeholders from different backgrounds, as well as to seeking peer review recommendations, and that deserves to be commended. EPA hopes these comments will provide some additional points for consideration in the final version. Please feel free to contact me if you would like to discuss any of EPA's comments further.

Sincerely,



Jill Fullagar  
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EPA, Region 10